

### **REMARKS**

Claims 1-8 are pending. By this response, claims 1 and 5 are amended. Reconsideration and allowance based on the above amendments and following remarks are respectfully requested.

The Office Action rejected claims 1-8 under 35 U.S.C 103 as being unpatentable over Ishigami (U.S. 2002/0118291) in view of Hatlestad (U.S. 5,555,464) and Ochi (U.S. 4,558,365). This rejection is respectfully traversed.

In embodiments of the present invention as recited in independent claims 1 and 5, photosensitive cells are arranged in a specific manner such that adjacent columns of photosensitive cells are offset. Each photosensitive cell has assigned full vertical transfer registers two on each side of the photosensitive cells. The vertical transfer registers from adjacent photosensitive cells overlap each other in the vertical direction. The overlapping vertical transfer register create a vertical transfer path. See Figs. 2a and 4a.

Applicants respectfully submit that Ishigami, Hatlestad and Ochi fail to teach at least the above features of independent claims 1 and 5. Ishigami and Hatlestad teach a lattice box arrangement of photosensitive cells. Each photosensitive cell is vertically aligned with the adjoining photosensitive cells in the vertical and horizontal directions. The photosensitive cells are not shifted in position substantially half way from the adjoining cells in the vertical and horizontal directions. Further, the vertical transfer paths are located on one side of the photosensitive cells. Each photosensitive cell does not have assigned four transfer registers in which adjacent transfer registers of adjacent photosensitive cells combine to create the vertical transfer paths.

Further, Ochi teaches a honeycomb arrangement of photosensitive cells. The transfer paths meander around the photosensitive cells. However, each photosensitive cell does

not have assigned four separate vertical registers in the combination recited in the claims to form the vertical transfer path.

Therefore, Applicant respectfully submits that the combination of Ishigami, Hatlestad and Ochi fail to teach or suggest, inter alia, each photosensitive cell is assigned four vertical transfer registers, the vertical transfer registers grouped in pairs in a vertical direction and formed on both sides of the photosensitive cell in a horizontal direction, where adjacent pairs assigned to adjacent photosensitive cells shifted in position are joined to form the vertical transfer paths, as recited in claim 1 and to form the transfer electrodes, as recited in claim 5.

In view of the above, Applicant respectfully submits that the combination of references fail to teach each of the recited features of independent claims 1-5 as required. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

#### Conclusion

For at least these reasons, it is respectfully submitted that claims 1-8 are distinguishable over cited art. Further consideration and prompt allowance are earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Chad J. Billings Reg. No. 48,917 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Application No. 09/657,413  
Amendment dated December 14, 2006  
Reply to Office Action of September 15, 2006

Docket No.: 0378-0371P

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: December 14, 2006

Respectfully submitted,

By Michael R. Cammarata - 48917  
Michael R. Cammarata  
Registration No.: 39,491  
BIRCH, STEWART, KOLASCH & BIRCH, LLP  
8110 Gatehouse Road  
Suite 100 East  
P.O. Box 747  
Falls Church, Virginia 22040-0747  
(703) 205-8000  
Attorney for Applicant